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ABSTRACT

Graduate students enrolling in research methods courses frequently experience significant anxiety. An effective instructor can lessen anxiety and alleviate frustration by using both personal interaction and course activities. This newsletter describes ways to reduce anxiety and help students approach research with understanding and interest. This includes trying to remember one's own personal experiences as a new graduate student, clarifying expectations of students up front, and determining students' research areas of interest early on. In-class activities can include grouping students in different ways for various purposes and having students give both formal and informal presentations to the class. Class assignments should be frequent, small, and varied, and connected to the large projects. Assignments can be completed in class, outside of class, individually, or in groups. General guidelines for professor-student interactions include: be flexible; give many small assignments with frequent feedback; be accessible; have students share their ideas and research in an ongoing manner; make the best use of group work (different groups for different purposes); take the class to the library during the first or second meeting; and allow for individual differences in experience and levels of interest. An appendix presents guidelines for conducting a survey of literature sources. (SM)

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Reducing Student Anxiety in Research Methods.

Linda R. Sanders

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Spring 2001 • Vol. 1, No. 3

Focus on Teacher Education

A Quarterly Newsletter for the Education Community

Theme

Graduate students enrolling in research methods courses frequently experience a great deal of anxiety and fear. Even though research methods should be one of the first courses taken, students sometimes postpone taking the course until the end of their program because of that anxiety. An effective instructor can lessen anxiety and alleviate frustration by using both personal interaction and course activities. This article describes ways to reduce the anxiety and help the students begin to approach doing research with understanding and interest. In-class activities and assignments are described and general guidelines for professor-student interaction are presented.

Reducing Student Anxiety in Research Methods

Linda R. Sanders,
Auburn University, Montgomery, Alabama

Do you remember your first graduate research methods course? I remember mine quite well. Although I had assisted my 7th- and 8th-grade students in library "research" for years, I knew that what my students were doing was not the same as doing research at the university level. I was not really sure what research was—what it would involve. I was filled with fear at what would be expected of me, especially after hearing horror stories about how hard the course was. In addition, I had heard that we would have to come up with a research project on our own. I remembered seeing a picture from a research text showing a poor graduate student hunched over with his head in his hands and a big scary monster hanging over, him. The caption explained that finding "the topic" for a thesis or dissertation is a great source of anxiety for many graduate students. I remember feeling just like that and have observed many of my students experiencing such similar anxiety.

Over the past few years, working with my graduate students in research methods courses, I have developed some strategies and techniques for reducing this anxiety. Having taught this course for different universities, each with different criteria and guidelines, I have observed an almost universal fear of the course, as well as fear of the research itself and particular fear of any statistics involved. Students will avoid taking the course, unless required to do so. They will postpone taking it until the end of their program, by which time the anxiety levels are unusually high. An instructor's positive attitude, reassurance, and appro-

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priate teaching techniques can reduce some of this anxiety. Providing the students with opportunities to interact with the professor and other students enhances learning and tends to diminish the overall fear.

In a study by Tiezzi and Zeuli (1995), classroom teachers' beliefs were shown to play a role in how teachers respond to research and to the research methods course. Through participation in the course, the teachers' attitudes changed. The authors supported their hypothesis that a "carefully constructed" course could change the way teachers think about research, and the way they view research as a means to help them reflect on their own teaching. The role of the instructor was critical to changing those beliefs.

When studying the relationship of anxiety and achievement in adult learners, Rothenberg and Harrington (1994) described the effects of adults' self-perception, mathematics anxiety, and research design anxiety. Their results showed that prior experience with mathematics and science does not seem to relate to the anxiety level in graduate research design classes. A more influential relationship was the adult students' perception of their own intelligence as it relates to mathematics anxiety and achievement in research design.

Previous studies relative to graduate research courses also have shown that a great deal of anxiety exists towards certain courses, but especially to statistics courses. Students experienced anxiety when encountering statistics "in any form at any level" (Onwuegbuzie, Da Ros, & Ryan, 1997). Wilson (1997) examined a number of factors related to anxiety and graduate statistics courses. A relationship was shown between the students' level of anxiety towards the statistics course and the teaching strategies used by the instructors to reduce anxiety. This finding supports an earlier study (Perney & Ravid, 1990), in which students attributed their success in a statistics course to their instructor.

It is not uncommon for students to delay taking required statistics, research, or other courses until right before graduation (Perney & Ravid, 1990; VanZile-Tamsen & Boes, 1997). VanZile-Tamsen & Boes (1997) analyzed the anxiety of graduate counseling students towards two required courses. In this case, the greater number of quarter hours taken, the greater the pre-course anxiety. The students experienced less anxiety if they took one of the courses, Career Development, earlier in their program. For the Test and Measurement course, the researchers found that students would probably experience anxiety regardless of when they took the course; by taking it earlier in the program, however, the anxiety associated with considering the course to be the "final hurdle" before graduation was lessened.

Having informally polled my students and discovered a high level of anxiety, and that many students were actually putting off taking the course, I began to think about what I might do to lessen this prob-

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lem. I first became interested in this topic when I started getting comments on my course evaluations or little notes on final exams like, "I was so scared to take research. However, (the professor) made it fun and interesting; . . . [the professor] directed us step by step and made a course I thought would be impossible very manageable" (from a Fall 1997 evaluation).

It is very important to determine early on what the students' research areas of interest are.

Fun and interesting?? Manageable??? These are not the terms I remember associating with research methods. My memories included a statistics professor I had who actually said to a roomful of teachers who were all like me, coming back to school to earn a master's degree after 10 years of teaching, "Say it in symbols; I'm not sure what you mean when you say it in words. . . ." Of course, our thoughts were just the opposite; if he would only say it in words, we might better understand. Having taught 10 research methods courses now at two different universities, and served on several master's thesis committees, I still believe there is a great deal of anxiety towards research methods courses and towards doing research. Presented below are some ways I try to reduce anxiety for my students; for some of them, it has worked.

Initial Approach

Try to remember your own personal experiences as a new graduate student. At most universities, the research methods course is one of the first courses taken. Many of these students are older, returning students who have been in the classroom as a teacher. It is very difficult to sit on the other side of the desk. Being back in school again is sometimes very threatening and students feel insecure and uneasy. I have had two students in the past three years who took the research methods course as their last graduate course. Both of these students admitted they were terrified to take research and had postponed it as long as possible. One way they are able to do this is that while some courses in the major might be offered only once a year, research methods courses are offered every term. So, they are able to keep postponing research methods until a more convenient or better term.

As all effective teachers should be aware, clarifying your expectations in the beginning is essential. Students need to know up front what the work load will be, how many papers will be due, etc. I try to teach them the APA (American Psychological Association) format as soon as possible, so that there are no questions concerning writing style. I also take them to the library early in the course, so that they can see firsthand what resources are available, including electronic resources. More than once, I have tried to describe the location of something, only to go to the library myself and find that it has been moved to another location on the opposite side of the building.

It is very important to determine early on what the students' research areas of interest are. In general education research methods classes, it is quite possible to have a mixture of teachers (elementary, secondary of all disciplines, and special education); counseling students (both school counseling and agency counseling); and educational leadership students, some of whom will become administrators. With at least 1,500 journals published in education each month, no one professor can be familiar with all of them. Initially, I handed out a list of about 50 well-known education journals, such as *American Educational Research Journal, Elementary School Journal,* and *Review of Educational Research.* Every time I teach the course the list grows or changes to meet the needs of the students in each class. I added such discipline-specific journals as *The Journal of Research in Science Teaching, Reading Research Quarterly,* and *Journal of Counseling and Development.* As the students turn in their work, my list keeps growing. I am continually amazed at all the new, topic-specific journals; for example, *The Journal of Play Therapy.*

Finding out the fields and interests of your students is important if you are going to assist them. I have a student information form that students fill out on the first night of class. This form asks for general information (address, phone numbers, degrees earned, or which degree they are seeking). In the upper right-hand corner, I ask them to write what their desired teaching level or future position will be (e.g., high school science teacher, kindergarten teacher, or elementary school counselor). I can use this information to sort the students into groups even on the first night. Typically, this group work would involve brainstorming areas of interest or concern in their field, such as violence in the schools, low reading test scores, or integrating technology into the classrooms. These groups would be by field: secondary, elementary, or counseling. Later on, I ask the students to write down three major areas of interest, such as student learning, motivation, and attitudes. This information helps me become aware of their background and area of research interest, and I then can help them become aware of the different resources available in those areas.

The information also helps when doing cooperative learning group activities. If I notice, for example, that two or three people are interested in school violence, I would form a new or different group with people from different backgrounds; mixing elementary teachers and school counselors, for example, to discuss or formulate possible research questions about school violence. If a counseling student is doing a paper on motivation, there also might be an elementary teacher doing research on motivation. Group work not only allows them to share the literature they find, but also gives them more ideas about different research designs, despite conducting research in different fields.

In-Class Activities

It is essential to promote as much in-class participation, discussion, and interaction as possible. Otherwise, students will not relax and ask questions. The fear of the unknown is great, and keeping the students confused and reluctant to ask questions just perpetuates that fear. Group

work does a lot to let the students get to know each other. I try to regroup the students for various purposes. Initially, I group them by field: Elementary, Secondary, Special Education, Counseling, and Educational Leadership. Later on, I group them by discipline or level; for example, biology, mathematics, or early childhood, middle childhood. Sometimes I group them by experience: those at the end of their degree with some of those just beginning; those with no research experience with those who have some. Finally, once I have determined their areas of research, I try to give them a chance to work with others who are interested in similar types of research or are interested in the same research design or similar topic. A student doing research on teacher effectiveness in elementary schools might learn something from a secondary mathematics teacher also doing research on that same topic.

One of the most important things I have learned is to give many small and varied assignments that are connected to, or are subsections of, the big projects.

Having the students give both formal and informal presentations to the class also helps reduce anxiety. Sometimes, we do a basic round-robin consisting of a one- or two-minute oral description of an article they have critiqued. Everyone gets to hear what variety of interests and what levels of experience exist in the class. They also find out who else might be doing a similar type of research project or who is researching a similar topic for a different field. Other times, the students must formally present their project to the class and entertain questions. Brainstorming sessions are very helpful once a general area of research has been determined. Students learn a lot from each other.

Class Assignments

One of the most important things I have learned is to give many small and varied assignments that are connected to, or are subsections of, the big projects. For example, three separate article critiques turned in at different times may be references for the final paper or project. These also serve as initial practice with writing references in correct APA format. One big project, the Literature Sources Survey (see Appendix), involves surveying many types of literature sources, not just journals. It requires specific lists of citations from different sources, such as three general refereed education journals, three field-specific journals, citations from indexes, handbooks, encyclopedias, etc. These sources can be used in the final project.

Assignments are completed in various ways: some in class, some outside of class; individually or in groups. The Literature Sources Survey

requires that students go to the library and learn what good sources are available other than on the Internet. Depending on university requirements, the final project is either a thesis proposal, a research project proposal, or a literature review. All of the earlier smaller assignments are linked to the final project. At mid-term, I require some kind of research plan, mini-proposal, or outline of the literature review that includes the topic, research questions, and key authors whose work will be used as the foundation of the project. This reinforces the idea that research is not done in isolation, and it also builds on the work of others. In addition, it gives students a chance to have feedback during the development phase with suggestions for expanding, narrowing, or clarifying. Students ask for this type of feedback so that they will know if they are on the right track. Furthermore, by giving students some written comments at the midpoint, the final project does not seem so overwhelming.

General Guidelines

As stated above, the recommendations presented here are a culmination of years of classroom experiences and are constantly being modified and adapted to meet the needs of the current group of students. However, a few general guidelines seem to hold true for most classes.

- Be flexible.
- Give many small assignments with frequent feedback.
- Be accessible.
- Have students share their ideas and research in an ongoing manner.
- Make best use of group work—different groups for different purposes.
- Take your class to the library during the first or second meeting.
- Allow for individual differences in experience and levels of interest.

In conclusion, the instructor is the key to how the students learn—and if they learn. Research previously mentioned has shown that graduate students do experience anxiety in research methods classes and that the instructor is instrumental in being able to alleviate that anxiety. By using some of the strategies and techniques listed above, the rumors about the horrors of research methods courses may start to dissipate and students might even look forward to taking these classes. One hopes that they will begin to see that becoming a producer and a consumer of research will, in fact, help them in their life's work, and that they will view research as something helpful, rather than something to fear.

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Appendix

Research in Education Assignment Sheet Dr. Sanders

LITERATURE SOURCES SURVEY

Point value: 50 pts. Due date: Mar 6(T)

Using the guidelines below, conduct a survey of the literature sources available to you in the AUM library, in your professional library, and on the Internet. Select a topic of interest in your professional area. The written report should consist of:

I. Title Page (1 page)

II. "I-Search" Description (Maximum, 1 page)
A paragraph describing what, when, and where you researched. A list of the topics you used, the ERIC descriptors used, and the results.

III. Sources Found (2-3 pages)
(Listed under each heading in APA format)

A. 3 Generic Educational Journal Citations (Different Journals)
Ex. *American Educational Research Journal*

B. 3 Field-Specific Journal Citations (Different Journals)
Ex. *Journal of Research in Science Teaching*

C. 3 Books or textbooks related to the topic

D. Citations found from each of the ERIC Indexes: CIJE & RIE.
List the index, the EJ or ED number, the ERIC descriptors you used, and the citation in proper APA format.

E. A citation found in one of the INDEXES discussed in the text on pp. 78-82, 91.
(Example: *Handbook of Research on Teaching*). State the index and write the citation in proper APA format.

F. List the names and addresses of three ERIC Clearinghouses or support components that would disseminate information on your topic.

G. Citation from one additional preliminary or secondary source.
List the source and the citation.

H. List two professional associations in your specific field that might also have information on your topic.

Use only current (1998-2001) journal articles. Citations and references must be written in the format of the American Psychological Association (APA). Please follow the instructions from the APA manual, the handouts provided by the professor, and the verbal instructions given in class.

The "I-search" description is a simple narrative that describes what you did, either using the computer or the library, or both. Be sure to list all ERIC descriptors used and the results.

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The readership of *Focus on Teacher Education* is encouraged to submit manuscripts for publication that focus on the preparation of teachers.

Articles may describe best practices for professional education courses, field work, mentoring, action research, school-university partnerships, etc.

Prospective authors wanting to discuss ideas and suggestions for manuscripts should contact the *Focus on Teacher Education* Editor:

Rebecca Harlin
16325 Golf Club Road, #311
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